AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1: Canceled.

2. (Currently Amended) The device as in claim **79** [1], wherein the fluorescent layer comprises a phosphor material.

3. (Original) The device as in claim 2, wherein the phosphor material comprises nanoscale phosphor grains.

4. (Original) The device as in claim 2, wherein the phosphor material absorbs excitation light at an ultra violet wavelength.

5. (Original) The device as in claim 2, wherein the phosphor material absorbs excitation light at a violet wavelength.

6. (Original) The device as in claim 2, wherein the phosphor material absorbs excitation light at a wavelength less than 420 nm.

7. (Original) The device as in claim 2, wherein the fluorescent layer comprises a non-phosphor fluorescent material.

8. (Original) The device as in claim 7, wherein the fluorescent material comprises quantum dots.

9. (Original) The device as in claim 7, wherein the non-phosphor fluorescent material absorbs excitation light at an ultra violet wavelength.

10. (Original) The device as in claim 7, wherein the non-phosphor fluorescent material absorbs excitation light at a violet wavelength.

11. (Original) The device as in claim 7, wherein the non-phosphor fluorescent material absorbs excitation light at a wavelength less than 420 nm.

12. (Currently Amended) The device as in claim **79** [1], wherein the fluorescent layer comprises a plurality of different of fluorescent materials which absorb the excitation light to emit light at different visible wavelengths.

13. (Original) The device as in claim 12, wherein the fluorescent layer is patterned into parallel stripes, and wherein at least two adjacent stripes have at least two different fluorescent materials that emit light at two different visible wavelengths, respectively.

Claim 14: Canceled.

15. (Currently Amended) The device as in claim **79** [14], wherein the Fresnel lens is in a telecentric configuration for the incident excitation light.

16. (Currently Amended) The device as in claim **79** [1],, wherein the first layer includes a stack of dielectric layers of at least two different dielectric materials.

17. (Currently Amended) The device as in claim **79** [1],, wherein the first layer is [an] **a** multi-layer interference filter.

Claims 18-20: Canceled.

21. (Currently Amended) The device as in claim **79** [1], wherein the fluorescent layer comprises a plurality of parallel phosphor stripes, wherein at least three adjacent phosphor stripes are made of three different phosphors: a first phosphor to absorb the excitation light to emit light

of a first color, a second phosphor to absorb the excitation light to emit light of a second color, and a third phosphor to absorb the excitation light to emit light of a third color.

22. (Original) The device as in claim 21, wherein the phosphors absorb excitation light at an ultraviolet wavelength.

23. (Original) The device as in claim 21, wherein the phosphors absorb excitation light at a violet wavelength.

24. (Original) The device as in claim 21, wherein the phosphors absorb excitation light at a wavelength less than 420 nm.

Claims 25-28: Canceled

29. (Currently Amended) The device as in claim **21** [26], further comprising:

a first optical absorbent material mixed in the first phosphor that absorbs light of the second and third colors and transmits light of the first color;

a second optical absorbent material mixed in the second phosphor that absorbs light of the first and third colors and transmits light of the second color; and

a third optical absorbent material mixed in the third phosphor that absorbs light of the first and second colors and transmits light of the third color.

30. Canceled.

31. (Currently Amended) The device as in claim **16** [30],, wherein the dielectric layers comprise alternating high and low index dielectric layers.

32. (Currently Amended) The device as in claim **16** [30],, wherein the dielectric layers are polymeric materials.

33. (Currently Amended) The device as in claim **16** [30],, wherein the dielectric layers are polyester materials.

34. (Currently Amended) The device as in claim **79** [1],, wherein the fluorescent layer is patterned to have different fluorescent regions with different fluorescence materials.

35. (Original) The device as claim 34, wherein the fluorescent layer is patterned to further comprise non-fluorescent regions without a fluorescent material to directly display light of the optical excitation beam.

36. (Original) The device as in claim 34, wherein the screen further comprises:

a second layer on a second side of the fluorescent layer to transmit the visible light and to block the excitation light; and

a contrast enhancing layer formed over the second layer to comprise a plurality different filtering regions that spatially match the fluorescent regions, wherein each filtering region transmits light of a color that is emitted by a corresponding matching fluorescent region and blocks light of other colors.

37. (Original) The device as in claim 34, wherein each fluorescent region includes a boundary that is optically reflective.

38. (Original) The device as in claim 34, wherein each fluorescent region includes a boundary that is optically absorbent.

39. Canceled.

40. Canceled.

41. (Currently Amended) The device as in claim **79** [1],, wherein the fluorescent layer comprises a plurality of parallel fluorescent stripes, each fluorescent stripe to absorb the excitation light to emit light of a designated color,

the device further comprising:

a contrast enhancing layer positioned relative to the fluorescent layer so that the fluorescent layer is placed at a position between the contrast enhancing layer and the first layer,

wherein the contrast enhancing layer comprises a plurality of different filtering stripes that spatially match the fluorescent stripes, where each filtering stripe transmits light of a color that is emitted by a corresponding matching fluorescent stripe and blocks light of other colors.

42. (Currently Amended) The device as in claim **79** [1], ~~further comprising:~~

~~a laser module operable to project and scan a laser beam as the excitation light onto the screen, the laser beam carrying optical pulses that carry information on an image to be displayed,~~

wherein the laser module comprises a modulation control which combines a pulse code modulation and a pulse width modulation to modulate the laser beam to produce image grey scales.

43. Canceled.

44. (Currently Amended) The device as in claim **79** [1], ~~further comprising a laser module which comprises~~ **wherein the optical module includes**:

~~**a diode laser operable to produce a laser beam as**~~ **diode lasers respectively producing laser beams of** the excitation light onto the screen~~, the laser beam carrying optical pulses that carry information on an image to be displayed~~;

a scanning module to scan the laser **beams** onto the screen to display the image;

a mechanism to monitor image data bits to be modulated on the laser beam to produce a black pixel monitor signal; and

a laser control coupled to receive the black pixel monitor signal and operable to operate **each diode laser** ~~the diode laser~~ at a driving current below a laser threshold current without turning off the driving current to produce a virtue black color on the screen when the black pixel monitor signal indicates a length of black pixels is less than a threshold and turn off the driving current to produce a true black color on the screen when the black pixel monitor signal indicates a length of black pixels is greater than a threshold.

45. (Currently Amended) The device as in claim **79** [1], ~~further comprising~~ **wherein the optical module includes**:

~~a laser to produce a laser beam as the excitation of light and being modulated to carry an image;~~

a polygon having reflective facets to rotate around a first rotation axis to scan ~~the laser beam~~ **each beam** on the screen in a direction perpendicular to the first rotation axis;

a scanning mirror to pivot around a second rotation axis perpendicular to the first rotation axis to scan ~~the laser beam~~ **each beam** on the screen in a direction parallel to the first rotation axis; and

a beam adjustment mechanism operable to change at least one of a position and a beam pointing of ~~the laser beam~~ **each beam** along the first rotation axis to control a position of ~~the laser beam~~ **each beam** on the screen along the first rotation axis.

Claims 46-78: Canceled.

79. (Currently Amended) A display device, comprising:

a display screen comprising a fluorescent layer that absorbs excitation light to emit

visible light, [and] a first layer on a first side of the fluorescent layer operable to transmit the excitation light and to reflect the visible light, **and a Fresnel lens formed on the first side of the fluorescent layer to direct the excitation light incident to the display screen at different angles to the fluorescent layer,** wherein the first layer comprises a composite sheet of a plurality of dielectric layers**;**

an optical module operable to produce scanning beams of the excitation light that scan across the display screen and positioned to direct the scanning beams of the excitation light to enter the display screen to reach the fluorescent layer, each scanning beam carrying optical pulses that carry information on an image to be displayed;

an optical sensing unit positioned to receive a portion of light from the screen and operable to produce a monitor signal indicating a spatial alignment of each scanning beam on the screen; and

a feedback control mechanism operable to receive the monitor signal and to control the optical module to adjust a timing of the optical pulses carried by each scanning beam in response to the monitor signal to correct a spatial alignment error of the scanning beam on the display screen indicated by the monitor signal.

80. Canceled.

81. (Original) The device as in claim 79, wherein the fluorescent layer comprises a plurality of parallel phosphor stripes spaced from one another.

82. Canceled.

83. (Original) The device as in claim 79, wherein the dielectric layers are polymeric materials.

84. (Original) The device as in claim 79, wherein the dielectric layers are polyester materials.

85. (Original) The device as in claim 79, wherein the fluorescent layer comprises different fluorescent regions that emit light of different colors, and a boundary of two adjacent different fluorescent regions is either optically reflective or optical absorbent.

86. (Original) The device as in claim 79, wherein the screen further comprises a second layer on a second side of the fluorescent layer to transmit visible light and to block the excitation light.

87. (Original) The device as in claim 86, wherein the second layer comprises a composite sheet of a plurality of dielectric layers.

Claims 88-90: Canceled.

91. (New) A display device, comprising:

a display screen comprising a fluorescent layer that absorbs excitation light to emit visible light, [and] a first layer on a first side of the fluorescent layer operable to transmit the excitation light and to reflect the visible light, and a Fresnel lens formed on the first side of the fluorescent layer to direct the excitation light incident to the display screen at different angles to the fluorescent layer, wherein the first layer comprises a composite sheet of a plurality of dielectric layers;

an array of lasers operable to produce laser beams of the excitation light, each laser beam carrying optical pulses that carry information on an image to be displayed;

a scanning module positioned to receive the laser beams from the lasers and to scan the laser beams across the display screen to enter the display screen to reach the fluorescent layer;

a first reflector and a second reflector positioned to direct the scanning laser beams from the scanning module to the display screen in a folded optical path; and

a feedback control mechanism operable to control directions of the scanning laser beams from the scanning module to adjust a timing of the optical pulses carried by each scanning laser beam, in response to a feedback control signal indicating a spatial alignment of the scanning laser beam on the display screen, to correct an error in the spatial alignment.

92. (New) The device as in claim 91, wherein the fluorescent layer comprises different of fluorescent materials which absorb the excitation light to emit light at different visible wavelengths.

93. (New) The device as in claim 91, wherein the fluorescent layer is patterned into parallel stripes, and wherein at least two adjacent stripes have at least two different fluorescent materials that emit light at two different visible wavelengths, respectively.